

ABSTRACT

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An integrated circuit substrate having a first surface for receiving a series of aligned layers during the creation of the integrated circuit, and a second surface disposed substantially opposite the first surface, where the second surface has at least one alignment mark for aligning the series of aligned layers one to another during the creation of the integrated circuit. In another aspect the invention provides for an apparatus for aligning a mask having an image and at least one complimentary alignment mark to a substrate having a first surface and a substantially opposing second surface. The substrate further has at least one alignment mark on the second surface. A mask support supports the mask in proximity to the first surface of the substrate. A substrate support supports the substrate with the first surface in proximity to the mask. An alignment means aligns the at least one alignment mark on the second surface of the substrate to the at least one complimentary alignment mark on the mask. An exposure source projects the image of the mask onto the first surface of the substrate, and a controller controls the mask support, substrate support, alignment means, and exposure source. In yet another aspect, the invention provides for a method for aligning a mask having an image and at least one complimentary alignment mark to a substrate having a first surface and a substantially opposing second surface. The substrate also has at least one alignment mark on the second surface. A mask is disposed in proximity to the first surface of the substrate. An image of the at least one alignment mark is created, as is an image of the at least one complimentary alignment mark. At least one of the mask and substrate is moved relative to the other, and the image of the least one alignment mark is aligned to the image of the at least one complimentary alignment mark. The image of the mask is projected onto the first surface of the substrate.

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